OMPL2001 Result

HP Proliant DL580 G7 Server Series, Intel Xeon L7555, 1.87 GHz

SPECompL_peak2001 = --
SPECompL_base2001 = 504788

Benchmark | Reference Time | Base Runtime | Base Ratio | Peak Runtime | Peak Ratio
-----------|----------------|--------------|------------|--------------|------------
311.wupwise_l | 9200          | 211          | 697727     |              |            |
313.swim_l   | 12500         | 628          | 318338     |              |            |
315.mgrid_l  | 13500         | 528          | 409378     |              |            |
317.applu_l  | 13500         | 590          | 366221     |              |            |
321.equake_l | 13000         | 542          | 383513     |              |            |
325.apsi_l   | 10500         | 286          | 587380     |              |            |
327.gafort_l | 11000         | 359          | 490814     |              |            |
329.fma3d_l  | 23500         | 941          | 399786     |              |            |
331.art_l    | 25000         | 277          | 4445765    |              |            |

Hardware

CPU: Intel Xeon L7555
CPU MHz: 1866
FPU: Integrated
CPU(s) enabled: 32 cores, 4 chips, 8 cores/chip (HT on)
CPU(s) orderable: 1-4 chips
Primary Cache: 32 KB I+D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 24 MB I+D on chip per chip
Other Cache: None
Memory: 512 GB (64 x 8 GB 2Rx4 PC3-10600R, ECC, running at 1066 MHz and CL9)
Disk Subsystem: Two 500 GB 7200 RPM 2.5" SAS hard drives, in RAID 1 mirror
Other Hardware: None

Software

OpenMP Threads: 64
Parallel: OpenMP
Operating System: RHEL6.0 (x86_64) 2.6.32-71.14.1.el6
Compiler: Intel(R) C/C++ Composer XE 2011 for Linux, version 12.0.2, Build 20110112
File System: NFSv3 (IBM N5500 NAS) over Gb ethernet
System State: Multi-user, run level 3

Notes/Tuning Information

ulimit -s unlimited
Removes limits on the maximum size of the automatically-extended stack region of the current process and each process it creates.

Compiler flags for base level optimization

COPTIMIZE : -O3 -xSSE4.2 -xHost -no-prec-div -openmp -shared-intel -mcmmodel=medium -ipo
FOPTIMIZE : -O3 -xSSE4.2 -xHost -no-prec-div -openmp -shared-intel -mcmmodel=medium -ipo
F77OPTIMIZE : -O3 -xSSE4.2 -xHost -no-prec-div -openmp -shared-intel -mcmmodel=medium -ipo

Environment:

KMP_AFFINITY=compact,1
controls the binding of OpenMP threads to the physical processing units
KMP_SCHEDULE=static,balanced
used to fine tune the load balancing of parallel loops that are statically scheduled under OpenMP with no chunk size specification
KMP_BLOCKTIME=infinite
Sets the time, in milliseconds, that a thread should wait, after completing the execution of a parallel region, before sleeping.
KMP_LIBRARY=throughput
Selects the OpenMP run-time library
KMP_STACKSIZE=31m
Sets the number of bytes to allocate for each parallel thread to use as its private stack
OMP_NESTED=TRUE
Enables (TRUE) or disables (FALSE) nested parallelism.
OMP_DYNAMIC=FALSE
Enables (true) or disables (false) the dynamic adjustment of the number of threads.
OMPL2001 Result

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SPECompLpeak2001 =  --
SPECompLbase2001 =  504788

SPEC license #: HPG3440A
Tested by: Indiana University
Test site: Indiana University
Test date: Oct-2011
Hardware Avail: Jun-2010
Software Avail: Jan-2011

Notes/Tuning Information (Continued)

OMP_NUM_THREADS=64
Sets the maximum number of threads to use for OpenMP* parallel regions if no other value is specified in the program itself.

Portability Flags:
318.galgel_m=default=default=default:
FFLAGS=-fixed -extend-source 132

BIOS settings notes:
Intel Hyper-Threading Technology (SMT): Enabled
Intel Turbo Boost Technology (Turbo) : Enabled (Max 2.533GHz)

For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file.html